

## Flushing the System and Fitting a Steering Pump

Before starting, you need the following information; manufacturers specifications for Oil, Torque Settings for fitting the new part and Belt tension. You should also be equipped with the necessary tools and equipment to follow these instructions fully.

1. Prepare the vehicle to the point where you are ready to remove the old pump.
2. Remove the old pump. (Disassemble any bolt on pulley and the original bolts for reuse later)
3. If separate and not supplied with the new pump; remove and clean the remote reservoir. DO NOT use paint thinners, as the solvents in these can harm hydraulic seals.
4. Reinstall the cleaned reservoir, DO NOT reconnect the return line from the steering rack. Seal the inlet of the reservoir so it will not leak during the flushing procedure.
5. Fit the new pump.
6. Connect the oil supply hose from the reservoir to the pump (use new clamps if originally sealed with single use clamps) ensure an airtight fit. For pumps with a threaded inlet always use new sealing washers.
7. Connect the outlet of the pump to the steering rack, ensure the line is not twisted or pinched and follows the original pipe route, fixing back into place with original fixing points. Replace any O rings or washers with new ones, in cases where there was a crushable Teflon ring, Teflon tape can be used in its place.
8. We strongly recommend installing a new belt, once installed, tension to the manufacturer's specification and check with a belt tension meter. If an auto tensioner is used, it is still necessary to measure the tension as a faulty tensioner will result in premature failure of the new pump and may have caused the original pump to fail.

**2 people** are now required for the following steps (flushing):

9. Raise both front wheels off the ground, so that the wheels are free to turn from left to right.
10. Place the return line of the steering rack into a container to collect flushing fluids.
11. (Person 1) Slowly fill the reservoir with oil allowing air to bubble out, then, be ready with sufficient oil to keep the reservoir full as the engine runs.
12. (Person 2) Start the engine once the reservoir is full of oil (Idle speed only) steer from side to side but avoid full lock to prevent the pump making pressure.
13. When the oil runs clean into the container, allow at least an additional 2-3 litres of oil to pass through the system to make sure that all of the old oil and contamination is removed. (remember to keep the reservoir full at all times; **NEVER** allow the pump to draw in air as this will damage it) **THIS IS THE MOST IMPORTANT STEP TO ENSURE THE NEW PUMP WILL NOT FAIL PREMATURELY – DAMAGE DUE TO CONTAMINATION IS NOT COVERED BY WARRANTY**

## IMPORTANT FITTING INFORMATION



14. Switch off the engine.

1 person can now finish the job:

15. The front wheels no longer need to be raised.

16. Fit the return line from the steering rack to the reservoir inlet. Again ensure new clips or sealing washers are used where required, top up the reservoir to the indicated level.

17. Switch on the engine, leave to idle without steering for 15 seconds and then steer slowly once from lock to lock without hitting the lock stops, switch off the engine.

18. Recheck the oil level in the reservoir, top up if necessary.

19. Test drive, any high pitched noise at this point is likely due to aerated fluid and this will stop as the oil degasses. If noise continues, check that all connections are sealed correctly, air can be pulled into the system without visible signs of leaking.

After the test drive, recheck the, oil level, belt tension and tension of bolts securing pulleys.